(1) 40.0 g/kW-hr for Class I engines with displacement below 100 cc.

(2) 16.1 g/kW-hr for Class I engines with displacement at or above 100 cc.

(3) 12.1 for Class II engines.

(c) *Fuel types.* The exhaust emission standards in this section apply for engines using the fuel type on which the engines in the emission family are designed to operate. You must meet the numerical emission standards for hydrocarbons in this section based on the following types of hydrocarbon emissions for engines powered by the following fuels:

(1) Alcohol-fueled engines: THCE emissions.

(2) Natural gas-fueled engines: NMHC emissions.

(3) Other engines: THC emissions.

(d) *Useful life.* Your engines must meet the exhaust emission standards in paragraph (a) of this section over their full useful life as described in § 1054.107.

(e) *Applicability for testing.* The emission standards in this subpart apply to all testing, including certification, production-line, and in-use testing.

§ 1054.107 What is the useful life period for meeting exhaust emission standards?

This section describes an engine family's useful life, which is the period during which engines are required to comply with all emission standards that apply. The useful life period is five years or a number of hours of operation, whichever comes first, as described in this section.

(a) Determine the useful life period for exhaust requirements as follows:

(1) Except as specified in paragraphs (a)(2) and (3) of this section, the useful life period for exhaust requirements is the number of engine operating hours from Table 1 to this section that most closely matches the expected median in-use life of your engines. The median in-use life of your engine is the shorter of the following values:

(i) The median in-use life of equipment into which the engine is expected to be installed.

(ii) The median in-use life of the engine without being scrapped or rebuilt.

TABLE 1 TO § 1054.107—NOMINAL USEFUL LIFE PERIODS

Nonhandheld			
	Residential	Extended life residential [1]	Commercial
Class I	125	250	500
Class II	250	500	1,000
Handheld			
	Light use	Medium use	Heavy use
Class III—V	50	125	300

[1] Or "General Purpose."

(2) You may select a longer useful life for nonhandheld engines than that specified in paragraph (a)(1) of this section in 100-hour increments not to exceed 3,000 hours for Class I engines or 5,000 hours for Class II engines. For engine families generating emission credits, you may do this only with our approval. These are considered ''Heavy Commercial'' engines.

(3) The minimum useful life period for engines with maximum engine power above 19 kW is 1,000 hours (see § 1054.1(d)).

(b) Keep any available information to support your selection and make it available to us if we ask for it. We may require you to certify to a different useful life value from the table if we determine that the selected useful life value is not justified by the data. We may consider any relevant information, including your product warranty statements and marketing materials regarding engine life, in making this determination. We may void your certificate if we determine that you intentionally selected an incorrect value. Support your selection based on any of the following information:

(1) Surveys of the life spans of the equipment in which the subject engines are installed.

(2) Engineering evaluations of field aged engines to ascertain when engine performance deteriorates to the point where usefulness and/or reliability is impacted to a degree sufficient to necessitate overhaul or replacement.

(3) Failure reports from engine customers.

(4) Engineering evaluations of the durability, in hours, of specific engine technologies, engine materials, or engine designs.

§ 1054.110 What evaporative emission standards must my handheld equipment meet?

The following evaporative emission requirements apply for handheld equipment over a useful life of five years:

(a) *Fuel line permeation.* Nonmetal fuel lines must meet the permeation requirements for EPA Nonroad Fuel Lines or EPA Cold-Weather Fuel Lines as specified in 40 CFR 1060.102. These requirements apply starting in the 2012 model year, except that they apply starting in the 2013 model year for emission families involving small-volume emission families that are not used in cold-weather equipment. For fuel lines used in cold-weather equipment, you may generate or use emission credits to show compliance with these permeation standards through 2015 as described in §1054.145(h).

(b) *Tank permeation.* Fuel tanks must meet the permeation requirements specified in 40 CFR 1060.103. These requirements apply for handheld equipment starting in the 2010 model year, except that they apply starting in the 2011 model year for structurally integrated nylon fuel tanks, in the 2012 model year for handheld equipment using nonhandheld engines, and in the 2013 model year for all small-volume emission families. For nonhandheld equipment using engines at or below 80 cc, the requirements of this paragraph (b) apply starting in the 2012 model year. (Note: 40 CFR 90.129 specifies emission standards for certain 2009 model year engines and equipment.) You may generate or use emission credits to show compliance with the requirements of this paragraph (b) under the averaging, banking, and trading program as described in subpart H of this part. FEL caps apply as specified in §1054.112(b)(1) through (3) starting in the 2015 model year.

(c) *Running loss.* The running loss requirements specified in 40 CFR part 1060 do not apply for handheld equipment.

(d) *Other requirements.* The provisions of 40 CFR 1060.101(e) and (f) include general requirements that apply to all nonroad equipment subject to evaporative emission standards.

(e) *Engine manufacturers.* To the extent that engine manufacturers produce engines with fuel lines or fuel tanks, those fuel-system components must meet the requirements specified in this section. The timing of new standards is based on the date of manufacture of the engine.

§ 1054.112 What evaporative emission standards must my nonhandheld equipment meet?

The evaporative emission requirements of this section apply starting in the 2011 model year for equipment using Class II engines and in the 2012 model year for equipment using Class I engines over a useful life of five years. See §1054.110 for requirements that apply for nonhandheld equipment using engines at or below 80 cc.

(a) *Fuel line permeation.* Nonmetal fuel lines must meet the permeation requirements for EPA Nonroad Fuel Lines as specified in 40 CFR 1060.102.

(b) *Tank permeation.* Fuel tanks must meet the permeation requirements specified in 40 CFR 1060.103. Equipment manufacturers may generate or use emission credits to show compliance with the requirements of this paragraph (b) under the averaging, banking, and trading program as described in subpart H of this part. Starting in the 2014 model year for Class II equipment and in the 2015 model year for Class I equipment, the following FEL caps represent the maximum values for family emission limits that you may use for your fuel tanks:

(1) Except as specified in paragraphs (b)(2) of this section, you may not use fuel tanks with a family emission limit that exceeds 5.0 $g/m^2/day$ for testing at a nominal temperature of 28 °C, or 8.3